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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,735	11/20/2000	Boris Kolesnikov	016794/0415	8038

7590 03/21/2002
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EXAMINER

RHEE, JANE J

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 03/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

A9-6

Office Action Summary

Application No.

09/700,735

Applicant(s)

KOLESNIKOV ET AL.

Examiner

Jane J Rhee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

Content of Specification

1. (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification. It should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Reference to a "Microfiche Appendix": See 37CFR 1.96(c) and MPEP § 608.05, if the application was filed before March 1, 2001. The total number of microfiche and the total number of frames should be specified. Reference to a "Sequence Listing," a table, or a computer program listing appendix submitted on compact disc and an incorporation by reference of the material on the compact disc.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may

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point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet (37 CFR 1.52(b)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims.
- (k) Drawings: See 37 CFR 1.81, 1.83-1.85, and MPEP § 608.02.
- (l) Sequence Listing, if on paper: See 37 CFR 1.821-1.825.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

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The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to what the applicant meant by disclosing "by fiber layers which pass through the transitional region into the connecting region, and in that, in the transitional region between the fiber layers which pass through, fiber layers which do not pass through abut against corresponding layers composed of the reinforcement material". Please revise and clarify.

The terms "large and high" in claim 1 are relative terms which renders the claim indefinite. The terms "large and high" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

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The term "strong" in claim 8 is a relative term which renders the claim indefinite. The term "strong" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (page 1 lines 20-22, page 2 lines 9-29, and page 3 lines 1-11).

Applicant's admitted prior art discloses a composite material comprising a fiber composite, a large number of fiber layers embedded in a polymer matrix (pg 2 line 25), some of which preferably have fiber directions which differ from fiber direction of other fiber layers (pg 1 line 20-22), and a connecting region formed using a reinforcement material with a high embedding strength (pg 2 line 9-12). Applicant's admitted prior art

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also discloses the connecting region is formed from layers of the reinforcement material the connecting region that the fiber layers abut against the reinforcement material of the connecting region, in the transitional region between the fiber layers which pass through, fiber layers which do not pass through abut against corresponding layers composed of the reinforcement material (pg 2 lines 17-24). Applicant's admitted prior art also discloses that the fibers layers of the fiber composite and the abutment points are arranged symmetrically with respect to the center plane of the thickness of the fiber composite (pg 2 lines 20-24). Applicant's admitted prior art discloses that the fiber layers which pass through and the layers composed of the reinforcement material are formed in alternate layers in the connecting region (pg 3 lines 4-7). Applicant's admitted prior art discloses that the fiber layers and the layers composed of the reinforcement material all have the same layer thickness (pg 2 lines 28-29 pg 3 line 1). Applicant's admitted prior art discloses that the fiber layers, which pass through, are formed by fiber layers which are strong in respect to a tensile load (pg 1 line 21-25). Applicant's admitted prior art discloses that the reinforcement material is formed by metal layers (pg 2 line 13). Applicant's admitted prior art discloses that the fiber layers which pass through are formed with a fiber direction which has a 0, 90, or +/- 45 degree fiber direction (pg 1 lines 20-21). Applicant's admitted prior art discloses that the fiber layers have an oblique fiber orientation each rest directly against a fiber layer with the mirror-image symmetrical orientation with respect to the longitudinal direction and in that both fiber layers together have the thickness of 0 or 90 degree layer (pg 1 line 21 referring to +/- 45 degrees). Applicant's admitted prior art fails to disclose a transitional region

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being formed between the fiber composite and the connecting region in which fiber layers abut against the reinforcement material of the connecting region (pg 2 line 13-17). Applicant's admitted prior art fails to disclose that the abutment points between the fiber layers which do not pass through the layers of the reinforcement material are arranged offset in the transitional region. Applicant's admitted prior art further fails to disclose the layers fiber layers and layers composed of the reinforcement material having a layer thickness of between 0.2 and 1 mm.

However, since the applicant discloses that the reinforcement material is connected to the fiber layers with a connection whose layers are stepped being produced in order to improve the joint between the fiber composite and the reinforcement material, it is inherent that the transitional region is implied being formed between the fiber composite and the connecting region in which fiber layers abut against the reinforcement material of the connecting region.

Applicant's admitted prior art teaches that the fiber layers' thickness corresponds to the thickness of the layers composed of the reinforcement material so that the stepped configuration of the connection is easily achieved (pg2 lines 28-29, pg 3 lines1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a layer with thickness of between 0.2 and 1mm, since it has been held that discovering optimum value of a result effective variable involves only routine skill in the art absence of showing unexpected results. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jane J Rhee whose telephone number is 703-605-4959. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-301-9999 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jane Rhee
March 19, 2002


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

3/19/02